



Health & Safety SOP:

Lockout/Tagout (Control of Hazardous Energy)

(Ref. 29 CFR 1910.147)

Owner	Vice President Security & Safety Solutions
Department	Health & Safety
Effective Date	12/2021

Purpose

The purpose of the lockout/tagout (LOTO) program is to provide a system for the locking out and/or tagging out of energy-isolating devices to protect employees from the unexpected energization or startup of machines or equipment, or the release of stored energy that could cause injury to the employee.

Wherever possible, energy-isolating devices should be locked out. Before an employee services, repairs or performs maintenance, the machine or equipment must be isolated from all hazardous energy, and the energy isolation-device(s) for the machine or equipment must be locked out or tagged out. Each trade supervisor is responsible to ensure lockout procedures are in place and their employees are trained whenever employees service, repair or perform maintenance on machines or equipment.

Responsible Staff

Health & Safety personnel are responsible for overseeing the implementation of this policy.
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Types and Magnitude of Energy and Hazards

Each employee must be instructed in the types and magnitude of energy used by the company. The following types of energy are used:

- (a) Electrical (b) Mechanical
(c) Chemical (d) Hydraulic
(e) Pneumatic (f) Gravity

Training and Retraining of Affected and Authorized Employees

Each employee must be thoroughly trained with respect to lockout/tagout procedure used by the Center. Each employee must know that lockout/tagout is used to protect employees against hazardous energy from inadvertent operation of equipment or machinery. Each employee must understand that he or she is to never attempt to operate an energy-isolating device when it is locked or tagged. Each employee must be *retrained* if there is a change in the employee's job assignment, a change in machinery or equipment that presents a new hazard, a change in energy control procedures, or management considers that retraining is necessary.

Training or retraining must include:

- How to recognize hazardous energy sources.
- Type and magnitude of energy used especially with respect to the machinery or equipment to which the employee will be exposed.
- Purpose of the lockout/tagout procedure.
- Steps for shutting down, isolating, blocking and securing equipment to which the employee will be exposed.
- Steps for placement, removal and transfer of lockout/tagout devices and the division of responsibility for accomplishing those tasks.
- Requirements for testing to determine and verify effectiveness of lockout/tagout devices.
- The proper use and limitations of tags.

Employees who will use (actually implement) the lockout/tagout procedure must receive written authorization from supervision.

Energy-Isolating Devices

Each employee must be instructed that every department has conducted a survey of *all* machinery, equipment and processes that possess potentially hazardous energy. The survey located all equipment and identified all isolating devices that must be locked or tagged to render the equipment safe for service, maintenance or repair and describe applicable lockout/tagout



procedure. The information for each item of machinery or equipment has been recorded on Form A, which is maintained in the respective department and is readily available for use in conjunction with the lockout/tagout procedure.

Form A will be used whenever a new piece of equipment or machine is introduced into the work area or whenever a new procedure needs to be developed due to a change in process, machine or equipment making previous procedure invalid.



Form A

Types/Locations of Energy-Isolating Devices

1. Name of department: _____
2. Name of equipment or machine: _____
3. Serial number of equipment or machine: _____
4. Location of equipment or machine: _____
5. Each type of energy used by the equipment or machine:
 - a. _____
 - b. _____
6. Magnitude of each source of energy:
 - a. _____
 - b. _____
7. Hazards to be expected from each source of energy:
 - a. _____
 - b. _____
8. Type and location of each device for isolating energy to the machine or equipment and the method of lockout/tagout to be used (use an additional form, if needed):

<u>Type</u>	<u>Location</u>	<u>Method of Lockout/Tagout</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

9. Identification of each device and manner by which energy can be stored in the machine or equipment and identification of the procedure for dissipating or restraining the stored energy (use additional form, if needed):

Device/Manner

Procedure

- a. _____
- b. _____



Sequence of Lockout/Tagout System—Procedure and Form

Each employee will be informed of the lockout/tagout sequence. That sequence includes the following steps:

Step One—The authorized employee (designated by supervision to implement lockout/tagout) will notify all affected employees (operators and others in the area) that lockout/tagout is to be used and the reason for its use. Use Form A, “Types/Locations of Energy-Isolating Devices,” for the respective machine or equipment lists all pertinent information, including the magnitude of energy and the hazards to be expected.)

Step Two—The machine must be shut down by normal procedure.

Step Three—Each energy-isolating device must be located. (Use information from Form A for the respective machine or equipment.) Each device must be operated to isolate the equipment from the energy source(s).

Step Four—Each device or manner by which energy can be stored must be located. (Use information from Form A for the respective machine or equipment.)

Step Five—After responding to important notes (below), each energy-isolating device (information from Form A for the respective machine or equipment) must now be locked or tagged with assigned individual locks or tags.

Note:

- If a lock can be used, but a tag is chosen instead, complete a tagout justification before going on to step six.
- If more than one authorized employee is required to affix a lockout/tagout device (see group lockout), the designated group coordinator must have each authorized employee who affixes a lockout/tagout device sign his/her name and enter job title. Use a separate sheet if needed.

Step Six—(a) Ensure that personnel are not exposed; (b) attempt to start the equipment with the normal operating controls to ensure that lockout/tagout is effective; (c) return the operating controls to “neutral” or “off.” The equipment is now properly locked or tagged out.

Tagout Justification System

If the machine, equipment or process can be locked out and/or tagged out and a tag is chosen instead, respond to parts one and two of the following tagout justification system, then return to Sequence for LOTO, Step Six.

Requirement One

Full Employee Protection. If you cannot indicate a “yes” answer by checking each of the following items, do not use the tagout system:

- Tagout system provides full employee protection.



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- Tagout devices placed at the same location where the lockout device would have been placed.
- Tagout system provides safety equivalent to the lockout program.
- Employees can fully comply with all tagout-related provisions.

Additional Safety Measures. Check the measure(s) used to provide equivalent protection and/or state any other alternative used:

- Isolating circuit element removal.
- Control switches blocked.
- Extra disconnecting device opened.
- Removal of valve handles.
- Alternative measures used to provide equivalent protection: _____.

Tagout Device. Check the tagout device against each criterion listed below. The tagout device should satisfy each criterion:

- Singularly identified.
- Device used only for controlling energy.
- Not used for other purposes.
- Durable/substantial.
- Able to withstand its intended environment.
- Nonreusable.
- Attachable by hand.
- Self-locking.
- Indicates employee identity.
- Exposure will not cause deterioration.
- Does not deteriorate in corrosive environment.
- Standardized as to: ____color; ____shape and size; ____print and format.
- Minimum unlocking strength of no less than 50 pounds.
- Equivalent to a one piece, all environment-tolerant nylon cable tie.

Warning Message. Ensure that the tagout device:

- Warns against hazardous conditions.
- Includes "Do Not Start (Open, Close, Energize, Operate, etc.)"

Training. Be certain that the employees have been trained that:

- Tags are simply warning devices.
- Tags do not provide physical restraint.
- Tags must never be removed without authorization.
- Tags may evoke a false sense of security.
- Tags are only part of the overall program.
- Tags must be securely attached.
- Tags must never be ignored or bypassed.



Requirement Two

A. State your reasons for using the tagout system:

B. State how equivalent employee protection was provided:

C. Describe the training provided to employees:

At which location was the training provided:

Include the date of the employee training:

Include the signature of the person who performed the training:

Include signature and date of the person who authorized the use of the tagout system:

Procedure for Restoring Machines or Equipment to Normal Production Operations:



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- When servicing, maintenance or repair is complete and the equipment/machine is ready to be started up, the authorized employee will ensure that: (a) no one is exposed to the equipment/machine; (b) all tools have been removed from the machine/equipment; (c) guards have been reinstalled; (d) there are no exposed electrical wires; (e) and that he or she is satisfied that it is safe for startup.
- After responding to important notes (below), remove all lockout/tagout devices.

Note:

- If the authorized employee is not available to remove the lockout/tagout devices, the devices may only be removed by or under the direction of the supervisor who completes the following:
 - (a) Identify the authorized employee whose device is being removed (insert name).
 - (b) Describe all reasonable efforts to locate this employee: (insert efforts made).
 - (c) Describe the action taken to ensure that, prior to his or her resumption of work, the employee knows that the device was removed (insert efforts made).
 - (d) Enter signature and date of supervisor to certify the above steps were taken (insert signature and date).
- If more than one authorized employee is required to remove a lockout/tagout device, the designated group coordinator will have each employee who removes a device sign his or her name and enter the job title.

Name(s)/Titles:

- Operate the devices to restore energy to the machine/equipment.

Temporary Removal of Lockout/Tagout Devices

When testing, the positioning of machines/equipment or other requirements demand the temporary removal of lockout/tagout devices, the authorized employee or supervisor must: (a) follow the sequence steps one through three; (b) conduct the tests or position the equipment; and (c) de-energize all systems and reapply energy control measures in accordance with policy.

Outside Contractors

If the maintenance, service or repair is performed by an outside contractor, the supervisor must appoint an employee to serve as the outside contractor's authorized employee for the purposes of this policy.

Group Lockout or Tagout

When group lockout/tagout is required and when more than one group is involved, a group coordinator must be designated by supervision. The designated group coordinator must seek agreement from the other authorized employees and must ensure that each authorized



employee: (a) places his or her personal lockout or tagout device on the energy-isolating devices; or (b) places the device on a multiple lockout/tagout device (hasp) if the device cannot accept multiple locks/tags; or (c) secures the personal lock to a multiple-lock lockout box or cabinet that holds the key to the single lock on the energy-isolating device; and (d) signs and enters his/her job title at the time of affixing and removing the device.

Documentation of Employee Training

Documentation must be completed for each employee following every training or retraining session. Refer to form "Lockout/Tagout Training Documentation."

Lockout/Tagout Training Documentation

Name of Equipment/Procedure _____

Employee Name: _____

Employee Address: _____

Home Phone: (____) – ____ – _____

Cell Phone: (____) – ____ – _____

Job Title: _____

Department: _____

Date of Training or Retraining: ____ / ____ / ____

Signature of Employee: _____

Signature of Trainer: _____

Is the employee authorized to
implement lockout/tagout
procedure? ☐ Yes ☐ No

Date Authorized: ____ / ____ / ____

Authorizing Supervisor's
Signature: _____



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